

Title (en)

Hierarchical motion vector estimation using multiple block sizes

Title (de)

Hierarchische Bewegungsvektorsschätzung mit mehreren Blockgrößen

Title (fr)

Estimation hiérarchique de vecteurs de mouvement employant plusieurs tailles de blocs

Publication

**EP 0734175 A1 19960925 (EN)**

Application

**EP 95104091 A 19950320**

Priority

- EP 95104091 A 19950320
- CN 95103503 A 19950322
- JP 8733895 A 19950320
- US 40709095 A 19950320

Abstract (en)

An improved method for determining motion vectors by employing a multi-tier hierarchical motion estimation comprises (a) motion-estimating each of the hierarchical search blocks of a processing block with respect to a corresponding hierarchical search region to thereby provide motion vectors and minimum error functions corresponding to hierarchical search blocks, (b) comparing the minimum error functions with a predetermined threshold, (c) determining a search block having a least minimum error function among the hierarchical search blocks; and (d) if minimum error functions of one or more search blocks are smaller than the predetermined threshold, determining as a motion vector of the processing block, a motion vector corresponding to a search block of a highest hierarchy among said one or more search blocks and if none of the minimum error functions are smaller than the predetermined threshold, determining a motion vector corresponding to the search block determined in said step (c) as a motion vector of the processing block. <IMAGE>

IPC 1-7

**H04N 7/36**

IPC 8 full level

**H04N 11/04** (2006.01); **G06T 7/20** (2006.01); **H04N 19/105** (2014.01); **H04N 19/137** (2014.01); **H04N 19/176** (2014.01); **H04N 19/196** (2014.01); **H04N 19/33** (2014.01); **H04N 19/423** (2014.01); **H04N 19/50** (2014.01); **H04N 19/503** (2014.01); **H04N 19/51** (2014.01); **H04N 19/533** (2014.01); **H04N 19/57** (2014.01)

CPC (source: EP US)

**H04N 19/53** (2014.11 - EP US)

Citation (search report)

- [Y] EP 0538667 A2 19930428 - GEN INSTRUMENT CORP [US]
- [A] US 4980764 A 19901225 - HENOT JEAN-PIERRE M [FR]
- [A] EP 0397206 A2 19901114 - NEC CORP [JP]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 18, no. 155 (E - 1524) 15 March 1994 (1994-03-15)
- [A] PATENT ABSTRACTS OF JAPAN vol. 13, no. 463 (E - 833) 19 October 1989 (1989-10-19)

Cited by

KR100752530B1; EP2227902A4; DE10120140A1; DE10120140C2; US8432973B2; WO0172045A3

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

**EP 0734175 A1 19960925; EP 0734175 B1 20000628**; CN 1054017 C 20000628; CN 1131883 A 19960925; JP 3764505 B2 20060412; JP H08265777 A 19961011; US 5754237 A 19980519

DOCDB simple family (application)

**EP 95104091 A 19950320**; CN 95103503 A 19950322; JP 8733895 A 19950320; US 40709095 A 19950320